

#### REMARKS

Claims 11-18 are allowed.

Previously submitted claim 19 was rejected under 35 U.S.C. § 102(b) as being anticipated by Apps et al. (U.S. Patent No. 6,006,677) and Gronnevik (U.S. Patent No. 5,845,588). Previously submitted claims 20, 21, and 23-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gronnevik in view of Ford et al. (U.S. Patent No. 6,228,914).

With respect to the Examiner's rejections under 35 U.S.C. § 102(b) as being anticipated by Apps et al., Apps et al. has been carefully reviewed and, as understood, discloses a pallet having an anti-slip layer. Apps et al. does not disclose a "fire resistant layer" as is indicated by the Examiner's reliance upon the purported inherency of such a layer in the Office action. The only purported evidence of a "fire resistant layer" is the Examiner's unsupported statement that "any plastics provide a fire resistant layer (plastics inherently provide fire resistance)."

The Examiner has the initial burden of establishing a *prima facie* basis of inherency. See *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1463-64 (Bd. Pat. App. Int. 1990) (citations omitted). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Id.* (citations omitted) (emphasis in original). The Examiner has

not provided any objective evidence or cogent technical reasoning to support a finding of inherency in the instant case. Accordingly, the Examiner has not made a *prima facie* case to support a finding of inherency.

In fact, objective evidence indicates that plastics do not inherently provide fire resistance. For example, Endo et al. (U.S. Patent No. 6,344,508) states that "thermoplastic resins have a drawback of readily burning." See Col. 1, lines 62-63. Overholt (U.S. Patent No. 6,849,677) also states:

[w]ood pallets are inherently combustible, and are rather easily ignited. While polymer articles are in general somewhat more difficult to ignite, once ignited they also constitute combustible products, and pound for pound have more potential energy than wood articles. In the shipping industry, empty pallets are often stacked together for reuse or for return to the shipper ("idle storage"). When wood pallets are so stacked and ignited, the fire is generally concentrated in an upward direction. However, when polymer pallets burn, in addition to having greater potential energy (combustibility), the flame can also spread downward by dripping. Thus, the combustion of polymer pallets involves more heat and more potential energy, a combustion mechanism not found in wood pallets. Thus, it is desirable to minimize the combustibility and heat release, and in turn lower the flame spread of polymer based pallets.

See Col. 1, lines 20-37.

The above-cited observations are consistent with fire resistance data that was presented by The Vinyl Institute in a publication entitled "Fire and Polyvinyl Chloride" ("TVI Publication") in 1996. A copy of the publication is enclosed herein.

Figure 2 of the TVI Publication indicates that several plastics have an ignition minimum flux that is lower than or comparable to the ignition minimum flux of Douglas fir wood board. See TVI Publication at 4. For example, Figure 2 indicates that the ignition minimum flux for polyurethane is approximately 5 kW/m<sup>2</sup> for 600s and for 100s. The ignition minimum flux for Douglas fir wood board is approximately 28 kW/m<sup>2</sup> for 100s and approximately 15 kW/m<sup>2</sup> for 600s. See *id.*

Figure 5 of the TVI Publication indicates that several commodity plastics, such as ABS, polystyrene, polypropylene, polyethylene, and polymethyl methacrylate ("PMMA"), have peak heat release rates that are substantially higher than the peak heat release rates for oak, pine, and plywood. See *id.* at 6. The peak heat release rates for ABS, polystyrene, polypropylene, polyethylene, and PMMA range from approximately 350 kW/m<sup>2</sup> to slightly less than 600 kW/m<sup>2</sup> for an incident flux of 20 kW/m<sup>2</sup>. The peak heat release rates for oak, pine, and plywood range from approximately 75 kW/m<sup>2</sup> to slightly less than 110 kW/m<sup>2</sup> for an incident flux of 20 kW/m<sup>2</sup>. Accordingly, the objective evidence indicates that all plastics do not inherently provide fire resistance because many plastics have fire resistance properties that are less desirable than wood. Consequently, the objective evidence does not support the Examiner's assertion that plastics inherently provide fire resistance.

In addition, Apps et al. discloses "a rigid, durable plastic pallet that can be fabricated from just one type of material

without using an excessive amount of that material." See Col. 2, lines 30-33. The anti-slip layer is formed by a "scuffing" treatment in which the base material is subject to scuffing to provide the anti-slip properties. See Col. 5, lines 22-36. Scuffing actually decreases fire resistance of the base material because scuffing increases the surface area (i.e. surface energy) of the base material.

Apps et al. also teaches away from anti-slip coatings or layers that are formed from different materials because such coatings "can wear away", which would render such coatings ineffective. See Col. 2, lines 1-14. Accordingly, the Examiner has not made a *prima facie* case that suggests or otherwise indicates that Apps et al. anticipates or renders obvious claim 19 of the instant patent application.

With respect to the Examiner's rejections under 35 U.S.C. § 102(b) as being anticipated by Gronnevik, Gronnevik has been carefully reviewed and, as understood, discloses a pallet that includes an anti-slip layer. Gronnevik does not disclose a fire resistant layer.

The Examiner appears to equate an anti-slip layer with a fire resistant layer through the unsupported statement that "any plastics provide a fire resistant layer (plastics inherently provide fire resistance)." As discussed above, all plastics do not inherently provide fire resistance because many plastics have fire resistance properties that are less desirable than wood. Accordingly, the objective evidence does not support a finding of

inherency. Consequently, Gronnevik does not expressly or inherently anticipate claim 19 of the instant patent application.

With respect to the Examiner's rejections of previously submitted claims 20, 21, and 23-27, Ford et al. has been reviewed and, as understood, discloses an aqueous intumescent composition that is applied to a substrate by coating or impregnation. Ford et al. does not teach or suggest that the disclosed aqueous intumescent composition can be molded or co-extruded with the base material. Since claims 20, 21, and 23-27 are directed to pallets that include intumescent compositions that are molded or co-extruded with the base material, the combination of Ford et al. and Gronnevik does not teach or suggest all of the claimed features of claims 20, 21, and 23-27. Accordingly, the combination of Ford et al. and Gronnevik does not render claims 20, 21, and 23-27 obvious.

The amendment does not include new matter.

The rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) have been traversed and claims 11-27 are in condition for allowance. Accordingly, reconsideration and allowance of claims 11-27, as amended, is respectfully requested.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

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